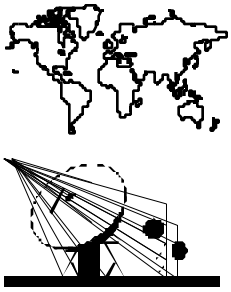
CODE 500

Mission Operations and Data Systems Directorate

Customer Order Fulfillment Handbook

December, 1996



Introduction

Product and service delivery is the most important part of the "reason for being" of the Directorate itself. Realizing this, a critical analysis of the development and delivery process within MO&DSD was launched, and a new "way of doing business" has been created.

Dozens of past, present and potential MO&DSD customers as well as people within the Directorate were extensively interviewed with the results being used to identify problems with existing processes. Issues from the interviews were distilled, and the causes of the issues were carefully analyzed. The existing processes were then examined to determine where significant improvement could be realized.

This handbook is intended to function as a set of guidelines for project teams to use in the planning and execution of their projects in a manner consistent with the streamlined process for product and service delivery within the MO&DSD. The handbook describes a process which allows a tight coupling between the process and MO&DSD strategic goals.

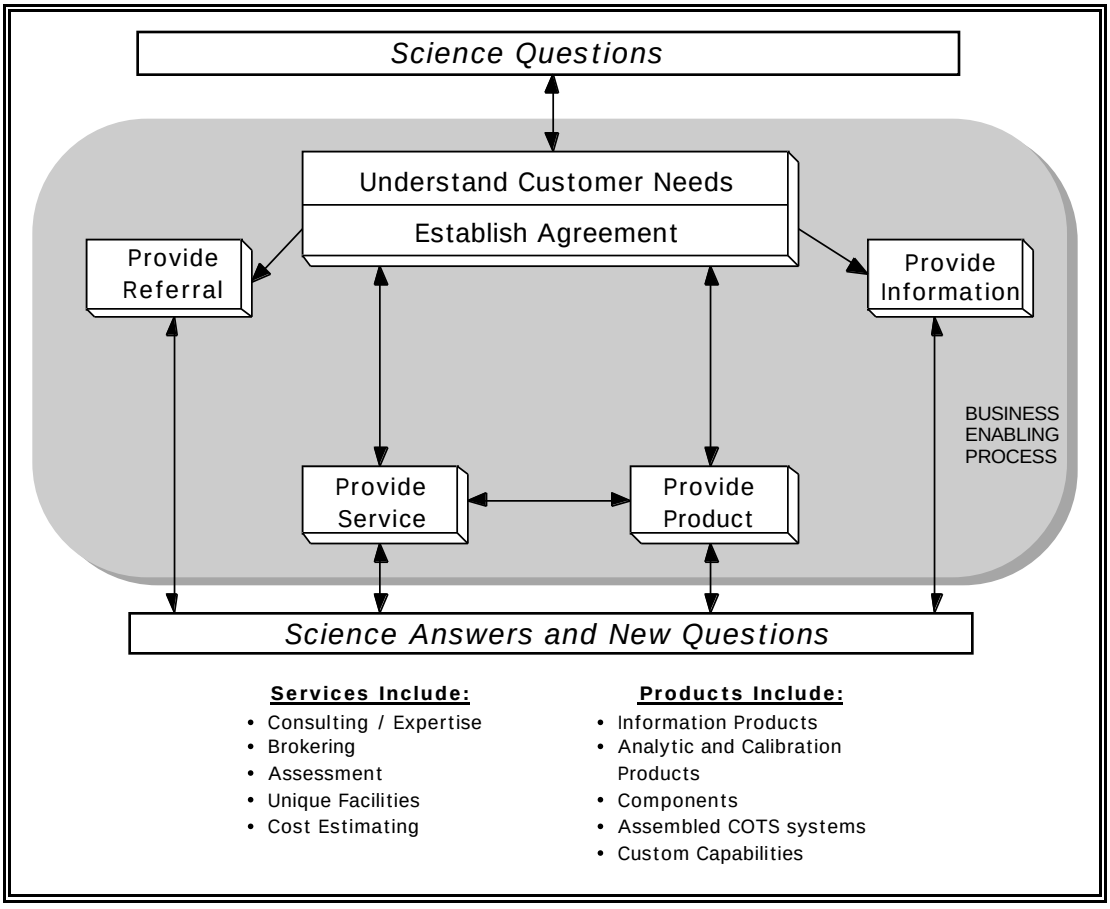


Figure 1 - The MO&DSD Business Process and the Order Fulfillment Process

The MO&DSD Business Process and the Order Fulfillment Process

THE BUSINESS PROCESS

- ✓ Customer centered
- ✓ Rapidly incorporates change
- ✓ Autonomous teams
- ✓ Minimal overhead
- ✓ Infuses technology

The overall *MO&DSD Business Process* is shown in Figure 1. A macro view of the *Order Fulfillment Process* is the set of boxes shown on top of the shaded *Business Enabling Process*.

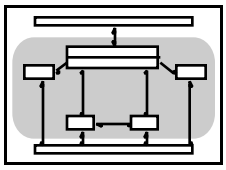
The most significant characteristics of the *MO&DSD Business Process* are:

- The identification of and continuous focus on customer needs;
- The involvement of the customer in the process;
- The realization that situations change as customer needs are refined and evolve, and that change must be effected rapidly;
- The institution of flexible configuration management procedures that facilitate a continual baseline concept that will allow changes to be made when they are needed as opposed to change being batched and intermittent;
- The tremendous autonomy with which teams operate;

- The tremendous reduction of internal, non-value added processes and paperwork;
- The focus of management roles as ones of supporting, coaching and providing resources;
- That products and services are delivered after considering lessons learned and concepts and models which have been developed in the past;
- That we refer customers to outsiders when the customer needs cannot be best met by us;
- That technology is critically evaluated during the project and is integral to success;
- The tight coupling between the process and MO&DSD strategic goals.

Note

The *MO&DSD Business Process* is applicable to all work performed within MO&DSD. The entire process is exercised for new projects, and many portions of it are exercised when modifying existing (legacy) systems.



The *Order Fulfillment Process* can be summarized as follows:

- Orders are received by the MO&DSD from customers.
- Working relationships are established with the customer to set the framework in which the order will be filled.
- Teams draw on resources, both people and systems, within the Directorate to develop and fill the order.
- Constant communication occurs between the customer and the team to ensure common understandings of needs and desires.
- Interactions with business enabling functions occur to provide services to the team which will allow the team to meet customer needs.
- All activities take place within the context of the marketplace (i.e. everyone is cognizant that people encountered throughout the process could be potential customers).

Note

A more detailed description of the *Order Fulfillment Process* can be found in Appendix A.

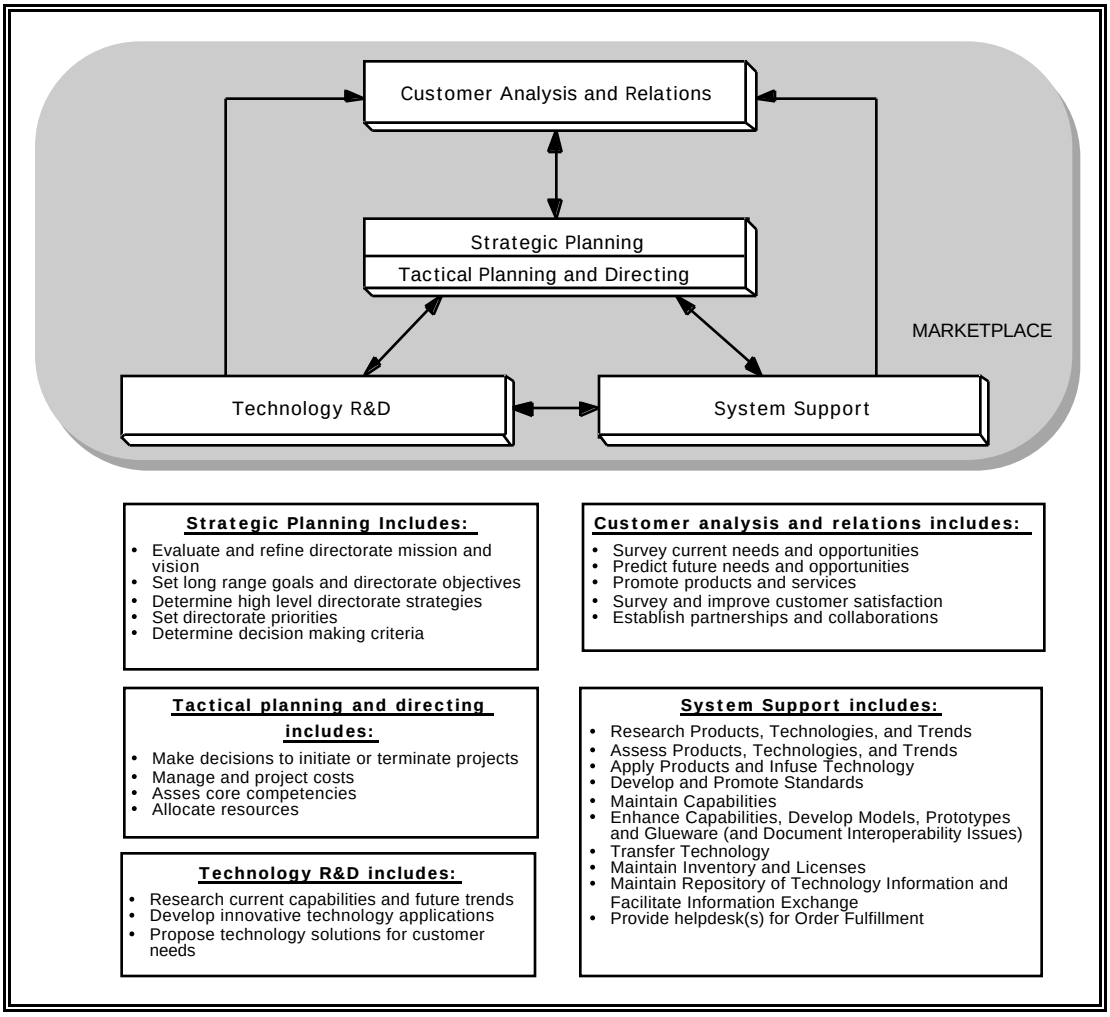


Figure 2 - The MO&DSD Business Enabling Process

The MO&DSD Business Enabling Process

A high level overview of the *MO&DSD Business Enabling Process* is shown in Figure 2. The *MO&DSD Business Enabling Process* is the supporting structure for the *MO&DSD Business Process* depicted earlier. The *Business Enabling Process* supports and serves the *Order Fulfillment Process* with the functions shown in the figure.

THE ENABLING PROCESS

- ✓ Focuses on strategic and tactical goals
- ✓ Promotes new business
- ✓ Supports technology development
- ✓ Directly supports MO&DSD teams

Fulfilling Orders

The next sections of the handbook focus specifically on the roles and responsibilities of people involved with fulfilling customer orders.

EXTERNAL ROLES

- ✓ Appoint Leader
- ✓ Review Process
- ✓ Obtain Resources
- ✓ Remove Barriers
- ✓ Receive Performance Recommenda-tions
- ✓ Defend Team
- ✓ Develop Personnel
- ✓ Provide Services

Roles and Responsibilities External to the Team

Many of the functions required for success occur outside of the team and are performed by various people within, and sometimes outside, of the MO&DSD. These functions include:

- Identifying a team leader and champion (a person who is a strong advocate of the process and the mission) on new efforts
- Approving the team's project plan
- Establishing a structure which assures the team and team leader follow, and continuously improve, a process
- Assuring the team obtains necessary resources in a timely and effective manner
- Assuring the team stays aligned with MO&DSD strategic goals
- Effectively removing barriers which impede a team's progress
- Assuring customer inputs to the team leader and champion's performance plans are made and maintained
- Ensuring and defending team autonomy throughout the process
- Developing individual skills, team skills and centers of expertise
- Providing any needed services that the team cannot perform themselves

THE LEADER

- ✓ Manages
- ✓ Organizes
- ✓ Assesses
- ✓ Resolves
- ✓ Assembles Teams
- ✓ Focuses on Customer
- ✓ Rates
- ✓ Improves

Roles and Responsibilities of the Team Leader

The team leader's roles and responsibilities are:

- Manages the entire customer order fulfillment process from receipt of the initial customer objectives to the final fielding of products and/or services to the customer
- Assesses the skills and expertise needed and selects the minimum number of core team members needed to accomplish the effort
- Works with the team's champion to resolve issues and conflicts that are beyond control of the team
- Identifies any internal or external consultants that may be needed

- Identifies and requests resources that are not directly under the team's control
- Ensures that the team maintains a customer focus throughout the process and aligns the teams goals with the customer's objectives
- Defines inputs into each team members performance plan and participates in the rating of team members' performance
- Assures the team works with the customer to define project guidelines and reflects these guidelines in the Customer Involvement Plan and the Project Plan

THE TEAM
- ✓ Produces
- ✓ Communicates
- ✓ Focuses on customer
- ✓ Improves

Roles and Responsibilities of the Team

The team is self-managing under the direction of the team leader. The team defines their mission, vision and objectives based on their customer's objectives and MO&DSD strategic goals. The team purpose, along with other information, is recorded by the team in a project plan (see Table 1 - Project Plan Outline).

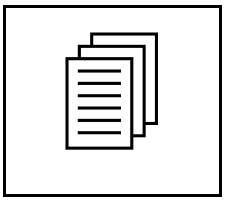
The team will identify customer expectations and develop measures to ensure that those expectations are met quantitatively and qualitatively. The team and customer will establish effective communications mechanisms to facilitate the change process and to avoid misunderstandings. Since the team will likely have multiple customers, the team will need to resolve multiple, and frequently conflicting needs.

The team should also identify customer supplied resources and information that will be needed for the successful completion of the project. The customers should agree to provide the needed resources to the team.

Crucial to team activity is tracking the effectiveness of the team's efforts. The team will record effort in the form of project metrics. These metrics will allow insight into the value of both *individual* and *team* efforts, and permit the team to identify, analyze and correct problems with the process. Metrics include measures of responsiveness to customer needs, the impact of bureaucracy, and overall efficiency. Reviews of the team process and progress will be conducted periodically.

Ultimately, the team is charged with providing superior solutions which meet all of their customers needs and expectations.

Note
Detailed descriptions of project metrics, including samples, can be found in Appendix B.



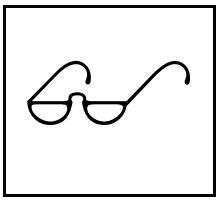
Reporting Guidelines

The team leader is responsible for reporting appropriate information to customers, champions and management in a timely and accessible manner.

Reporting will be based on the metrics developed by the team. These metrics will indicate how the team is progressing in meeting their customers' needs. The project

plan will indicate the exact information to be collected and reported, and also to whom the information is targeted.

The team leader must determine which information is internal (such as meeting minutes), and which information is published for general consumption. Information available for public consumption is not necessarily part of a formal reporting process. The goal is that information generated for reporting purposes must be useful to the team and to the consumer of the information.



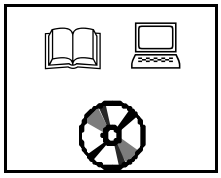
Reviews

Reviews should be held at the discretion of the team or customers when there is a need for information dissemination or decision(s) on specific issues.

Reviews will serve to add value to the product by providing needed information to those requesting and attending reviews. The selection of review panels should be based on the nature of the information being sought and limited to those with authority to make the necessary decision(s). Consequently, management and technical reviews, in general, should not be held in the same meeting.

Metrics reporting will represent the team's progress and should serve to eliminate separate management reviews. Attempts should be made to reduce the formality of presentation (volume and "cosmetics" of information), and to concentrate more on the specific information requiring feedback. This may result in more frequent, shorter, well defined reviews on a scheduled or ad hoc basis. Results of any decisions made or issues identified should be recorded.

Ideally, a review could be held informally between as few as two people (e.g., the customer and the project manager, or their representatives).



Information Recording Guidelines

The team will be required to generate a Project Plan, to be completed and agreed upon by the team, customer, management (as assigned by the Directorate) and champion prior to the project start. The plan should take no longer than two weeks to produce and should be five to six pages in length.

Discipline	Content
Team Scope	Mission, Vision, Objectives, Assumptions
Customer Involvement Plan	Scope of customer involvement (see Appendix C and also the description below)
Roles and Responsibilities	Definition of roles and responsibilities within the team
Products	What is to be delivered
Development and Delivery Approach	Requirements, testing, configuration management and system engineering approaches (see description below)
Communication Plan	What, when and how information is to be recorded and what and when information is to be reported
Resources	Facilities, people, budget and tools needed
Schedule	Milestones
Team Metrics	(See Appendix B)
Technology Challenges	Areas within the project that have the potential for technology solutions (technology infusion).

Table 1 - Project Plan Outline

Two of the most important portions of the Project Plan are the Customer Involvement Plan and the Development and Delivery Approach:

The Customer Involvement Plan is the vehicle for the team to explicitly identify all of their customers and documents the extent and manner in which the customers will be involved in the process.

The plan describes how the team will deliver products and services to their customers, defines the primary needs and expectations of each customer and identifies the type of descriptive information that customers expect with their products.

The completed plan represents an agreement between the team and their customers for working together to achieve a successful project.

The plan becomes a living document that is refined and updated as needed in close collaboration with the customer.

The Development and Delivery Approach must describe how the team will generate, record, and obtain customer approval for requirements definition, testing, configuration management and systems engineering approach. In defining all approaches, the team should consider their own needs, MO&DSD strategic needs and the needs of the customer as paramount, defining a course of action which offers value to all.

The *requirements approach* will describe how requirements are to be generated, recorded and agreed to by the customer.

The *testing approach* will describe how the system will be validated and verified.

The *configuration management approach* will describe how information related to the maintenance and configuration of the system is to be recorded (i.e. documentation control process, recording "as builts", etc.).

The *systems engineering approach* will describe the systems engineering methodologies to be used and which resources are needed to perform the systems engineering functions.

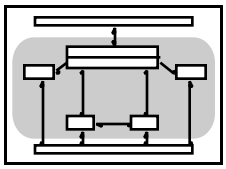
The team will generate a Project History at the completion of distinct portion(s) of the effort. The Project History will include a historical overview of the project, a review of key phases, key events and include summaries of data recorded during the effort (metrics, lessons learned, etc.).

Project history recording should begin at the initiation of the team effort.

Any additional information to be recorded by the team (e.g., Interface Control Documents with external organizations, system design materials, User's Guides) and the manner with which it is to be recorded is left to the discretion of the team and customer but must be documented in the plan. Strategic needs of the Directorate must also be considered when planning what type(s) of information needs to be recorded (e.g., information needed to sustain a system throughout its lifecycle).

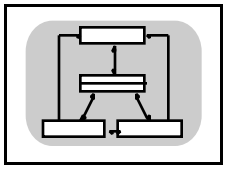
Note

The *minimum* requirements for documentation associated with a project are the Project Plan and the Project History.



Summary

This handbook describes the basic process which will allow in-house teams to be customer focused and efficient in accomplishing their mission. The process is designed to be tailored to meet the unique demands of each project.



The overriding message is that the individual project teams will know best how to satisfy their customers, and thus it is incumbent upon the team to devise and use methods that best fit the project, the team, and the customer.

Appendix A - Detailed Process Description

A more detailed description of the *Order Fulfillment Process* follows. The depiction of the four "Provide" functions shown at a macro level in the handbook in Figure 1 differ from the depiction in this appendix. The "Provide" functions in Figure 1 are the products and services resulting from the "Assemble/Build" and "Field" steps shown in Figures A-3 and A-4.

A "Select/Build Capabilities" checklist is also included. This checklist can be used as a guideline when the customer desires a product

Process Overview (Figure A-1):

The process begins with detailed communications with the customer to understand the needs and expectations and establish an agreement. If the customer desires information, referral or a service (as opposed to a 'product'), the implementation team directly "fields" (performs) the request.

If the customer desires a tangible product, the product is assembled and/or built and then "fielded" (delivered) to the customer.

The iteration between assembling/building/fielding and getting feedback from the customer must be rapid. There should be minimal delay in getting feedback from the customer throughout the process as the product or service is being developed or delivered. Since the customer is generally a team member, or is otherwise closely connected to the team, the opportunities for feedback are numerous. If the customer is not directly involved for any reason, it is critical to quickly present the product or service to the customer, get immediate feedback, then quickly incorporate the feedback into another delivery.

Understand Customer Needs and Establish Agreement (Figure A-2)

Figure A-2 describes the different types of information that the team and customer develop.

Assemble/Build (Figure A-3):

After agreeing to the details of the product that is to be supplied, the team begins the process of producing. The process begins with obtaining the components for the system. The system is then integrated (if necessary) and quickly tested. After alpha testing, a product is presented to the customer for evaluation. If there is little or no integration needed (which may be the case with COTS), there may be no need for integration and testing - that is the reason the two rightmost boxes are shaded as optional.

Field (Figure A-4):

After building the product (or agreeing that only a service or information is needed), the team presents the product or performs the service. After fielding, customer feedback is evaluated, new agreements are reached, and the process repeats again, beginning with the Understand Customer Needs and Establish Agreement step.

Process Overview

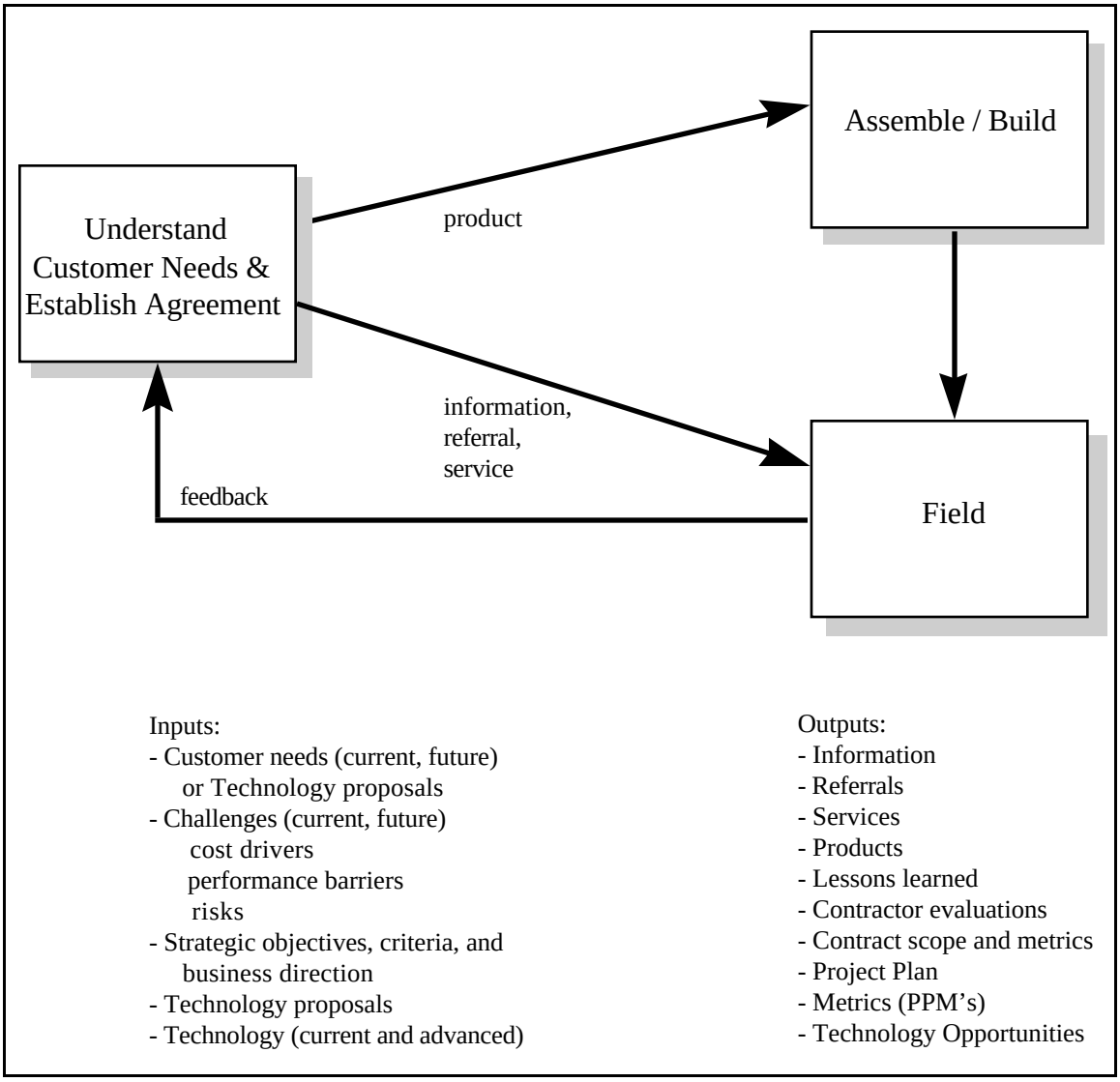


Figure A-1

Understand Customer Needs and Establish Agreement

- **Determine Roles and Responsibilities and Team Scope**
  - Team strategy (members' roles and responsibilities)
  - Decision-making and conflict-resolution process
- **Plan Customer Involvement**
  - Identify customer(s) (scientists, operators, funding sources, etc.)
  - Understand customer objectives
  - Determine means of customer involvement, including possible team membership
  - Identify customer responsibilities and focal point(s)
- **Plan Communication Mechanisms**
  - Plan information recording
  - Plan reporting mechanisms
- **Educate team and customer on processes**
- **Provide Information or Referral**
- **Identify Customer Requirements**
- **Identify Products and Primary Deliverables**
- **Determine Success Criteria and Metrics**
- **Identify Technology Challenges and Potential Breakthroughs**
  - Identify risks
  - Identify cost drivers
  - Identify performance drivers

Figure A-2

Understand Customer Needs and Establish Agreement
(continued)

- **Determine Development and Delivery Approach**
  - Requirements approach
  - Design approach
  - Testing/verification approach
  - Configuration management approach
  - Contract scope and metrics for outsourcing
- **Estimate, Identify, and Establish Availability of Resources**
  - People, facilities, equipment, tools, budget, life-cycle costs
- **Establish Schedule**

Figure A-2 (continued)

Understand Customer Needs and Establish Agreement
(continued)

Build Project Foundation:

- **Obtain customer and management approval of project plan**
- **Register development ideas (with repository/technology transfer office)**
- **Assess and forecast off-the-shelf architectures, technologies, and capabilities**
- **Analyze functional and performance requirements**
- **Analyze current and projected life cycle costs**
- **Analyze risks**
- **Perform operations analysis**
- **Review end-to-end data flow**
- **Refine operations timeline**
- **Prepare alternative options for customer choice**
- **Collect metrics**
- **Contribute to list of technology opportunities**

Figure A-2 (continued)

Assemble / Build

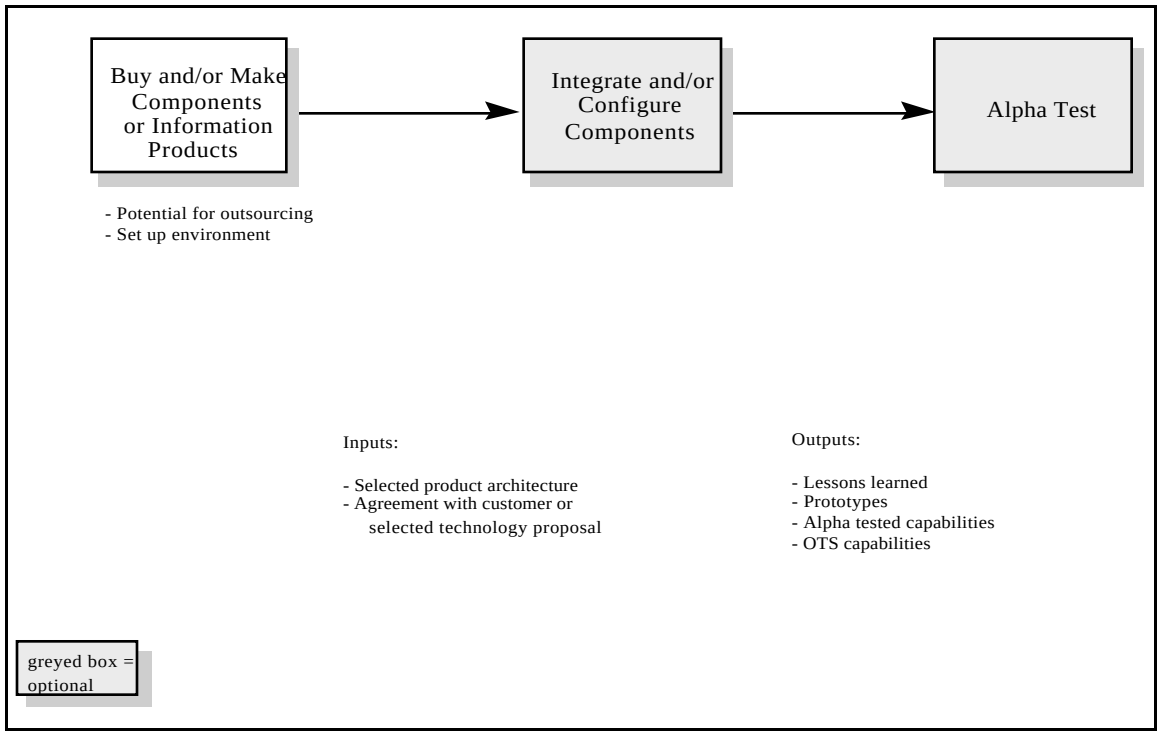


Figure A-3

Field

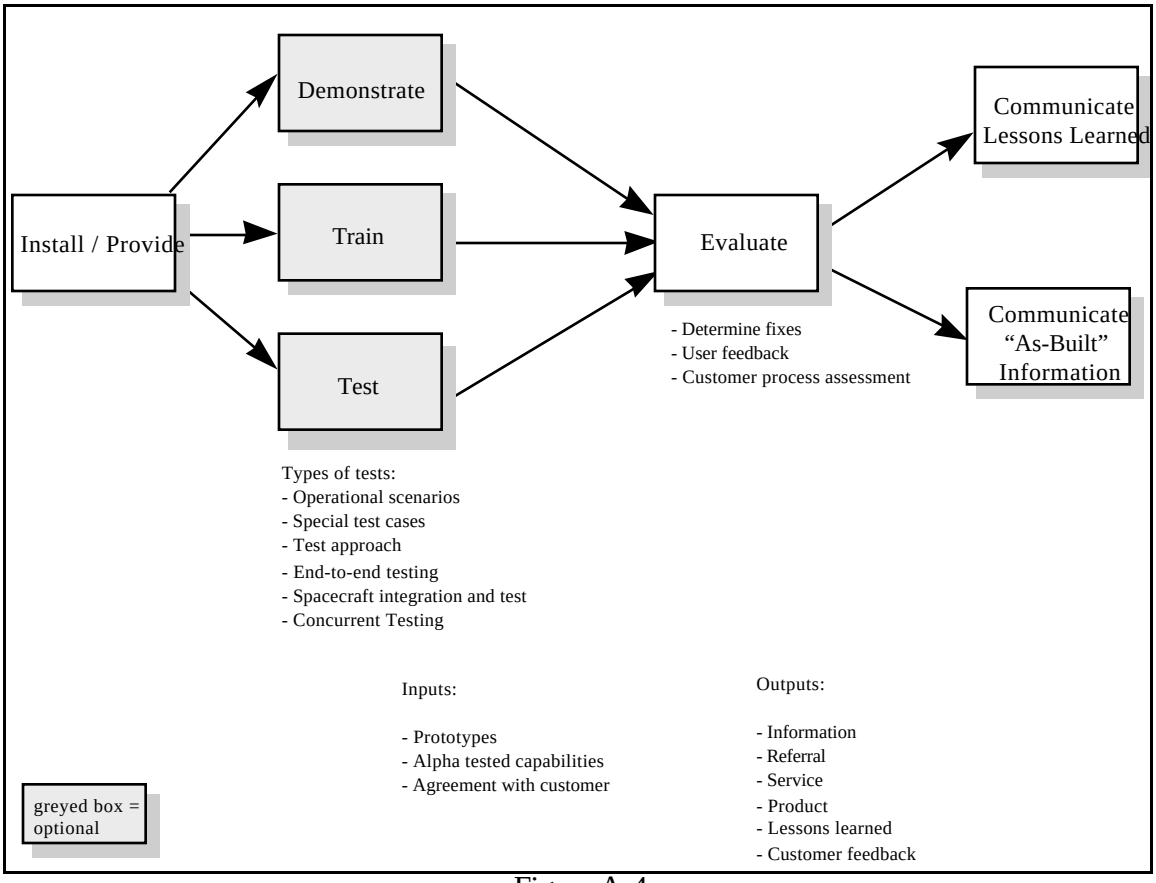


Figure A-4

Select/Build Capabilities Checklist
To be used as a guide if the customer desires a product

1. Refine Operations Concept, System Architecture and Capabilities

The following steps do not have to be performed sequentially, but may be performed in a parallel and/or iterative fashion. The only consideration is that each step should be addressed at some point before moving to 2.

a. Do the customer's objectives require a modification of the customer's end-to-end data flow? __Yes __No
   If Yes, modify customers end-to-end data flow.
   End-to-end data flow complete? __Yes

b. Does the customer's operations timeline need to be modified? __Yes __No
   If yes, modify the customer's operations timeline.
   Operations timeline complete? __Yes

c. Have changes occurred to the customer's operations concept which require an operations analysis?. __Yes __No
   If yes, perform an operations analysis.
   Operations analysis complete? __Yes

d. Is a modification need in the customer's staffing approach. __Yes __No
   If yes, modify the customer's staffing approach
   Customer's staffing approach complete? __Yes

e. Identify and analyze the customer's performance and functional requirements based on the customers objectives and operations concept.
   Analysis of the customer's functional and performance requirements complete. __Yes

f. Is modification of the system architecture needed? __Yes __No
   If yes, Refine the system architecture. In this refinement off-the-shelf architectures should be assessed
   System architecture refinement complete? __Yes

g. Do the system capabilities need to be modified? __Yes __No
   If yes, identify new or modified system capabilities. In this identification off-the shelf capabilities should be assessed.
   All new/modified system capabilities identified? __Yes

h. Do any new/modified system capabilities require a technology assessment? __Yes __No
   If yes, perform a technology assessment.
   Technology assessment complete? __Yes

i. Do the customer's objectives or new/modified capabilities require end-to-end trades? __Yes __No
   If yes, Perform end-to-end system trades.
   End-to-end trades complete? __Yes

1. Refine Operations Concept, System Architecture and Capabilities (cont.)

j. Perform a risk analysis for each new/modified architecture, capability or technology being considered. The risk analysis should include cost, schedule and technical risk.
Risk analysis complete? __Yes

k. Provide a test approach for verifying the functional, performance and operational requirements for each capability, architecture or technology identified. The testing needs of the team as well as the customer should be taken into consideration.
Test approach complete? __Yes

l. Provide current, if applicable, and projected life cycle cost and schedule for each capability, architecture or technology identified. Cost should include implementation or purchase cost if applicable, software licensing costs, integration and configuration costs , cost for testing, maintenance costs and operations costs. If their is more than one option for providing a capability, provide a cost and schedule for each option.
Costs and schedule provided? __Yes

2. Choose Architecture and Capabilities

a. Select the desired architecture, if applicable, and capabilities with the customer based on information provided in steps 1 and 2.
Architecture and capabilities chosen? __Yes

b. For each capability perform a buy/make decision.
1) Is the capability currently owned by NASA? __Yes __No
If yes, provide integration/configuration and test costs for this capability $_____

2) Can the capability be bought/obtained off-the-shelf commercially or from another source? __Yes __No
If yes, provide purchase, integration/configuration and test costs for this capability $_____

3) Must this capability be built because it is not otherwise obtainable? __Yes __No
If yes, provide build, integration/configuration and test costs for this capability. $_____

3. Buy or Make Components

Buy or Make components as determined in step 2.
All components available? __Yes __No

4. Integrate/Configure Components

If there is a major discrepancy in the time period when all identified components are available. You may choose to integrate, alpha test and deploy components as they become available.
Integrate/Configure available components.
Available components integrated/configured? __Yes

5. Alpha Test

Perform alpha test on the system as defined in the teams test approach.
Alpha testing completed? __Yes

Appendix B - Metrics

Information Gathering for Metrics

The team needs to gather the following information which will be used for process analysis and improvement (numbers in brackets refer to the notes following the table):

Goal	*Desired Trend*	*Metrics*
Be responsive to customer needs	· Reduce time to respond to customer requests	· Measure elapsed time from customer request to customer satisfaction [1] · Track customer desires that, for whatever reason, could not be provided [2]
	· Reduce number of customer complaints, formal error reports and change requests	· Track causes of changes [3]
	· Increase customer satisfaction	· Survey customers to determine subjective satisfaction [4]
Be flexible and remove bureaucracy	· Eliminate non-value-added activities	· Identify and quantify non-value added activities [5] · Track responsiveness of organization to team needs/requests [6]
Be efficient	· Minimize life cycle costs	· Anticipated cost trends [7]
	· Reduce cost of system development	· Measure cost [8] · Track causes of errors [9]

Note 1: Customer requests fall into two primary categories: new order, or change request for existing order. Responsiveness to customers needs to be measured for each request. Response time is in terms of elapsed time as well as deviation between the customer's expected date of delivery and the actual date of delivery. Three dates need to be tracked: customer order date, expected delivery date, and actual delivery date.

Note 2: Some requirements which originate from the customer may selectively be omitted based on an inability to satisfy them or because, upon negotiation with the customer, they are found not to be cost effective. While this may not reflect poorly on that particular customer's order fulfillment, this is important information to track. A list of customer desires not met needs to be maintained. The list will help prepare the organization to better meet future customer needs.

Note 3: Each change falls into one of three broad categories: new need, misunderstood need, or error in implementation of understood need. The cause of each change needs to be recorded. The team should strongly consider the use of on-line tools to track this information for each customer-originated change request.

Note 4: The degree to which the customer is satisfied with both needs and expectations, and also any positive or negative perceptions of the customer need to be recorded.

Note 5: Activities not directly related to satisfying the customer need to be quantified (see *Example Metrics for "Identify and quantify non-value added activities"* in this appendix).

Note 6: The elapsed time spent waiting for necessary information or resources will be used to measure the effectiveness of the organization in supporting the Order Fulfillment Process. The team needs to collect this information in each case that an external process is critical to the project schedule.

Examples of such times are:

- Product assessment - cycle time from request to fulfillment for external group to provide a product assessment
- Procurement - cycle time from generation of a procurement request to delivery
- Assignment of requested manpower - total man-months during which the project is under its staffing plan / request
- Provision of requested facilities - deviation between facility request date

Note 7: An estimate of anticipated costs and trends needs to be developed and updated at appropriate points during the project.

Note 8: The cost of the order fulfillment process will be measured by the manpower (total time) spent in each of the following categories, which correspond to the Order Fulfillment Process. The team members are requested to record time spent in each of these areas on a weekly basis.

- Project planning - generation of project plan and all that it entails
- Understanding customer needs - educate team and customers, collaborate, communicate, gather requirements
- Selecting and/or building capabilities, products and services - designing, building, documenting, integrating, assembling, researching, and alpha testing
- Deploying or providing capabilities - delivering services, delivering products, field testing, demonstrating, installing, and training

Note 9: The cost of errors needs to be recorded.

Example Metrics for "Identify and quantify non-value added activities"

Name	
Project	
Function on Project	
Phone	
Week Ending	
Total Time Spent on Project	

Please estimate the time that you spent this week in each of the categories. Any of the activity categories may include meetings, telephone calls, email, etc. If any time was spent in low-value-added activities, please describe the activity and why you feel that it was not very useful. If you are not sure whether the time spent was high or low value, put it on the low side and explain. Please be candid. This information will only be used to improve the process.

ACTIVITY	VALUE ADDED	NOT VALUE ADDED	EXPLANATION
DOING - includes selecting, designing, building, documenting, integrating, testing, installing	60 hours	5 hours	We implemented a reporting capability which we thought the customer wanted, but found out that it needed to be completely different, and had to redo
ADMINISTERING - includes planning, project-internal reporting, budgeting, reviewing	5 hours	5 hours	I was required to attend 2 status meetings - at each one I reported and listened to the same status, which I already knew
COMMUNICATING WITH CUSTOMER - includes formal and informal communication, demonstrations, reviews	15 hours		
SUPPORTING ORGANIZATIONAL REQUIREMENTS - includes project-external reporting, personnel and administrative mandates	2 hours	8 hours	It took me 3 hours to put together my MSR, which did not provide any value to me. Also, I spent a couple of hours playing phone-tag and trying to find a lost PR. And, I went to mandatory training in how to work effectively with giraffes, and there aren't any in my division.

Appendix C - Customer Involvement Plan

Customer Involvement Plan

The purpose of the customer involvement plan is to ensure that the team maintains a customer focus throughout the customer order fulfillment process. The plan is part of the project plan because involving the customer should be an integral part of the project plan. The customer involvement plan should focus on three major topics

1. What the team provides to the customer
2. What the customer provides to the team
3. How the customer and the team will work jointly

A more detailed break down in what should be considered in each area is provided below.

Team → Customer

Establish responsiveness metrics

The team needs to explore with their customers how quickly the customers expect to respond to their requests. Responsiveness should cover the customers' original request as well as modifications to this request. Requests can be divided into different categories (e.g., minor, medium, major) to help to determine the expected responsiveness. Responsiveness metrics should become part of the metrics package in the project plan.

Establish quality metrics

The team needs to explore their customers' expectations in terms of quality of the products and services to be provided. Quality metrics should become part of the metrics package in the project plan.

Documents to deliver

The team should work with the customers to determine what documents the customers expect to be provided with their products and services and what form the documents should take (e.g., electronic web page). The frequency and dates of delivery should be reflect in the team's project schedule.

Customer Reviews

The team should work with their customers to determine what type of reviews the customer requires and the level of customer involvement in those reviews. The team should work with the customer to determine the level of formality required for the review and specifically identify benefits to the team and customer of holding the review.

Visits to customers

The team should plan to be in communication with the customer on a regular basis. Some of this communication should take place via visits to the customers site as practical.

Educate customer

The team should plan to educate the customers on what MO&DSD products and services are available and how these capabilities are provided. The team should explore with the customer how existing products and services can meet the customers needs.

Train customer

The team and customer should work together to determine the level and type of training that the customer expects. The team should reflect the training requirements on the teams schedule in the project plan.

Cost/Benefit options

The team should provide a cost/benefit analysis on each capability that the customers request. The team should provide options with varying levels of risk if appropriate.

Maintain customer focus

The team should make sure that all of their processes and goals are aligned to meet the customers needs and expectations. The team should involve their customers where appropriate in making decisions and keep them informed of progress.

Measure satisfaction

The team should have a method of periodically determining their customers' satisfaction with the fulfillment of the order. Ideally this determination should take place as unobtrusively as possible as part of the normal communications with the customers. The customers should not be aware that their satisfaction is being measured. The team should be prepared to make changes at any point to improve any deficiencies noted by the customer.

Establish focal point

The team should establish a point of contact for each of their customers. The point of contact should have the following characteristics:

1. Breadth of knowledge & information
2. Communication skills
3. Decision making authority
4. Relationship responsibility

Customer→Team

Identify customers/users

The team and customers should work together to ensure that all users of the products and services the team will provide have been identified.

Establish customer focal points

Each of the team's customers should establish points of contact who communicate with the team when there are issues, concerns or decisions to be made.

Identify customer objectives

The customers should provide an initial set of objectives to the team at the start of the project. The customer and the team should work together to refine the customers' objectives as the project progresses.

Customer supplied resources/information

The team should identify any customer resources/information that will be necessary for the success of the project (e.g., customer facilities, external interfaces, operations personnel). The team should collaborate with the customer to ensure these identified resources/information are available to the team.

Educate team (on customers' process)

The team should understand what their customers intend to do with the products and services that the teams provide. The team should request the customers educate them on their processes to the extent necessary to comprehend the customers' needs and expectations.

Customer is part of team

As feasible and practical customer representatives should be included on the team. The team should try get the customers to commit these resources as necessary to ensure the success of the project.

Customer defines measure of their satisfaction

The customers need to identify the bases by which their satisfaction with the project can be measured. These measures should include criteria for unacceptable, acceptable and superior performance.

Joint

The team should identify all areas where collaboration between the team and the customers is necessary.

Early Deployment (collaborate)

The team should work with their customers to determine if early deployment of some capabilities is feasible and desirable.

Communication

The team and the customer should determine what methods of communications (both formal and informal) will be used during the project. This communication should keep the customers and team apprised of status, help facilitate the change process and minimize misunderstandings between the team and their customers.

Decision Making

The team and the customers should work together to identify the areas where joint decisions should be made. The team and customers should identify a process for making these decisions and should identify the decision makers in each instance.

Objectives

The team and customers should work together to establish and refine the overall objectives for the project. The team and customers should have a process for refining objectives as the need arises.

Negotiate

The team and customers should establish a positive environment for constructive negotiation of the products and services will be provided while taking in account cost/benefit analysis and risk factors.

Example Methods

The following are ideas that can be used to facilitate collaboration between the team and their customers.

1. On-line tools
2. Joint working meetings
3. Celebrations!